

**In the Abstract**

***Kindly add the following Abstract:***

An exploration device to monitor the penetration of an instrument in an anatomic structure including at least two electrodes; a source of voltage supplying the at least two electrodes; a means for measuring impedance between the electrodes; a means of angular location formed by at least one electrode punctually coinciding with a peripheral surface of the penetration instrument, the coinciding surface of the electrode having a position set off from a longitudinal axis the instrument; and means for detecting a position of the at least one electrode.